

# *Training and Support to Improve ICD Coding Quality: A Controlled Before-and-After Impact Evaluation*

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**Background:** The proposed National Health Insurance policy for South Africa requires hospitals to maintain high quality International Statistical Classification of Diseases (ICD) codes for patient records. While considerable strides have been made to improve ICD coding coverage by digitising the discharge process, further intervention was required to improve data quality. The aim of this controlled before-and-after study was to evaluate the impact of a clinician training and support initiative to improve ICD coding quality.

**Methods:** This study compared aspects ICD coding quality between two central hospitals in the Western Cape before and after the implementation of a training and support initiative for clinicians at one of the sites. The difference in differences (DID) in data quality between the intervention site and control site were calculated. Multiple logistic regression was also used to determine the odds of data quality improvement after the intervention and to adjust for potential differences between the groups.

**Results:** The intervention had a positive impact of 38.0% on ICD coding completeness over and above changes that occurred at the control site. Relative to the baseline, patient records at the intervention site had a 6.6 (95% CI 3.5 – 16.2) adjusted odds ratio of having a complete set of ICD codes for an admission episode after the introduction of the training and support package. The findings on impact for ICD coding accuracy were not significant.

**Conclusion:** There is sufficient pragmatic evidence that a training and support package may have a considerable positive impact on ICD coding quality in the South African setting.

**Public Citation:**

Dyers R, Ward G, du Plooy S, Fourie S, Evans J, Mahomed H. Training and support to improve ICD coding quality: A controlled before-and-after impact evaluation.

S Afr Med J 2017;107(6):501-506.  
DOI:10.7196/SAMJ.2017.v107i6.12075.